

AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Please replace paragraph [0213] of the published specification with the following:

[0213] The freeze-dried compositions obtained in Examples 5 to 11 were in the form of a non-powder cake-like lump (freeze-dried cake) after freeze-drying. As shown in Table 2, the freeze-dried compositions obtained in Examples 5-11, which showed a disintegration index of at least 0.15, were easily made into fine particles in the vessel by an air impact arising through an air speed of about 35 m/sec and an air flow rate of about 40 ml/sec, and thus obtained a fine particle fraction having a mass median aerodynamic diameter of 5 microns or less, and hence it was possible to produce preparations suitable for transpulmonary administration. Each freeze-dried composition showed a favorable fine particle fraction. Moreover, it was verified that the freeze-dried composition obtained in Examples 5 to 11 showed high residual activity after freeze-drying and residual activity after high-temperature preservation, and also maintained high IFN- γ activity even in the preparation of a composition and under conditions of high-temperature preservation.

TABLE 2

	Ex. 5	Ex. 6	Ex. 7	Ex. 8	Ex. 9	Com. Ex. 10	Com. Ex. 11
IFN- γ (IU)	100,000	100,000	100,000	1,000,000	1,000,000	1,000,000	1,000,000
Phenylalanine	1.2 mg	1.2 mg	1.2 mg	1 mg	1 mg	1 mg	—
Leucine	0.3 mg	—	—	0.3 mg	—	—	—
Valine	—	0.3 mg	—	—	0.3 mg	—	0.8 mg
Isoleucine	—	—	0.3 mg	—	—	0.3 mg	—
Arginine hydrochloride	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg	0.2 mg
Disintegration Index	0.191	0.190	0.181	0.316	0.293	0.281	0.150
Mass median aerodynamic diameter ($\mu\text{m} \pm \text{SD}$, MMD \pm MMAD)	1.537 \pm 1.438	1.698 \pm 0.542	1.874 \pm 1.842	1.278 \pm 0.386	1.387 \pm 1.591	1.964 \pm 1.673	1.597 \pm 1.625
Fine particle fraction	67%	64%	67%	85%	82%	78%	70%
Residual activity after freeze-drying	83%	80%	84%	100%	92%	97%	80%
Residual activity after high-temperature preservation	93%	95%	98%	93%	98%	78%	87%

Please replace paragraph [0217] of the published specification with the following:

[0217] The freeze-dried compositions obtained in Examples 12 to 14 were in the form of a non-powder cake-like lump (freeze-dried cake) after freeze-drying. As shown in Table 3, the freeze-dried compositions obtained in Examples 12 to 14, which showed a disintegration index of at least 0.25, were easily made into fine particles in the vessel by an air impact arising through an air speed of about 35 m/sec and an air flow rate of about 40 ml/sec, and thus obtained fine particle fraction having a mass median aerodynamic diameter of 5 microns or less, and hence it was possible to produce a preparation suitable for transpulmonary administration. Moreover, it was verified that the freeze-dried compositions obtained in Examples 12 to 14 showed high residual activity after freeze-drying and residual activity after high-temperature preservation, and also maintained high IFN- γ activity even in the preparation of a composition and under conditions of high-temperature preservation.

Table 3

	Ex. 12	Ex. 13	Ex. 14
IFN- γ	1,000,000 IU	1,000,000 IU	1,000,000 IU
Phenylalanine	0.8 mg	1 mg	1 mg
Leucine	—	0.3 mg	0.3 mg
Leucine-phenylalanine	0.2 mg	—	—
Lysine	—	0.2 mg	—
Threonine	—	—	0.2 mg
Arginine	0.2 mg	—	—
hydrochloride			
Disintegration index	0.251	0.285	0.327
Mass median aerodynamic diameter ($\mu\text{m} \pm \text{SD}$, MMDAMMAD)	1.578 ± 1.285	1.389 ± 1.427	1.256 ± 1.223
Residual activity after freeze-drying	90%	83%	92%
Residual activity after high-temperature preservation	92%	85%	89%

Please replace paragraph [0222] of the published specification with the following:

[0222] The freeze-dried composition obtained in Example 15 was in the form of a non-powder cake-like lump (freeze-dried cake) after freeze-drying. As shown in Table 4, the freeze-dried composition obtained in Example 15, which showed a disintegration index at least 0.05, was easily made into fine particles in the vessel by an air impact arising through an air speed of about 89 m/sec and an air flow rate of about 100 ml/sec, and thus obtained fine particle fraction having a mass median aerodynamic diameter of 5 microns or less, and hence it was possible to produce a preparation suitable for transpulmonary administration. Moreover, it was verified that the freeze-dried composition obtained in Example 15 showed high residual activity after freeze-drying and residual activity after high-temperature preservation, and also maintained high IFN- γ activity even in the preparation of a composition and under conditions of high-temperature preservation.

Table 4

	Ex. 15
IFN- γ	1,000,000 IU
Leucyl-valine	1.3 mg
Arginine hydrochloride	0.2 mg
Disintegration index	0.053
Mass median aerodynamic diameter ($\mu\text{m} \pm \text{SD}$, MMDAMMAD)	1.983 ± 1.676
Residual activity after freeze-drying	89%
Residual activity after high-temperature preservation	82%

Please replace paragraph [0227] of the published specification with the following:

[0227] The freeze-dried composition obtained in Example 16 was in the form of a non-powder cake-like lump (freeze-dried cake) after freeze-drying. As shown in Table 5, the freeze-dried composition obtained in Example 16, which showed a disintegration index at least 0.2, was easily made into fine particles in the vessel by an air impact arising through an air speed of about 1 m/sec and an air flow rate of about 17 ml/sec, and thus obtained fine particle fraction having a mass median aerodynamic diameter of 5 microns or less, and hence it was possible to produce a fine particle powder-form preparation suitable for transpulmonary administration. Moreover, it was verified that the freeze-dried composition obtained in Example 16 showed high residual activity after freeze-drying and residual activity after high-temperature preservation, and also maintained high IFN- γ activity even in the preparation of a composition and under conditions of high-temperature preservation.

Table 5

	Ex. 16
IFN- γ	1,000,000 IU
Valine	0.5 mg
Arginine hydrochloride	0.2 mg
Disintegration index	0.205
Mass median aerodynamic diameter ($\mu\text{m} \pm \text{SD}$, MMDAMMAD)	1.610 ± 1.548
Residual activity after freeze-drying	82%
Residual activity after high-temperature preservation	83%